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ABSTRACT

Interview tapes of adult Cubans from the Latin American Capital Cities Dialect Project were transcribed, focusing on the variability in the deletion of word-final consonants, especially /s/. The operation of the deletion rule for /s/ in Cuban Spanish is shown to be principally dependent on grammatical categories and surface syntactic function. In particular, it is shown that Labov's hypothesis that "whenever a final consonant is variably deleted the rule will operate more often... if it is an integral part of the word and not a separate morpheme..." is too general. The deletion in Cuban Spanish is constrained by a functionalist condition, in this case, the pressure to preserve the singular/plural contrast in noun phrases. The /s/ most often deleted is the one preceded by a determiner which preserves a number marker. Other grammatical categories are unaffected. (Author)

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FUNCTIONAL CONSTRAINTS ON DELETION OF WORD FINAL /S/ IN CUBAN SPANISH

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The term "function*ism" in diacronic theory was used* extensively by the Fren*h linguist, Martinet in his develop*ment of theories of pho*nological change. Kiparsky (1969) in* his discussion of "expl*anation" in phonological theory defines* functionalism in terms *of speech performance, that is, percep*tion, production, and a*quisition. Specifically he proposes* (p.195) that linguistic *metatheory must, in addition to the* paradigmof formal expla*nation, include "substantive conditions* which pertain not to th*e form of grammars... but to their out*put." Two are suggeste*d: leveling conditions "which state* that allomorphy in para*digms tends to get eliminated" and dis*tinctness conditions "w*hich...state that there is a tendency* for semantically releva*nt information to be retained in surface* structure." Of course *we are a long way from a characterization* of the phrase "semantic*ally relevant information." One way of* investigating this prob*lem is to examine the operation of del*etion rules in phonology. Labov (1971:472), in this context* suggested the following *statement as a candidate for a linguis*tic universal constrai*nt on language change:*

> "...whenever *a final consonant is vari*ably deleted *the rule will operate more* often...if it *is an integral part of* the word and *not a separate morpheme...* (P.472)."

This condition has, of *course, a direct functionalist interpre*tation: grammatical mo*rphemes may carry essential information,* whereas more often tha*t not the deletion of a final consonant* from a monomorphemic w*ord would not hinder greatly its recogni*tion.

If, then, in the *study of variable phonological rules we* find morphological con*itoning, it may be the case that distinc*ness is operating as a *functional constraint. However, Kiparsky* warns, "The mere existe*nce of such morphological conditioning* in rules is not of cour*se in itself enough to prove that func*tional factors are at w*ork."*

The purpose of thi*s paper is to examine the operation of* deletion rules in Spani*sh as evidence to support this function*alist hypothesis. In a*ddition certain refinements in the form*ulation of functionalis*t condition will be suggested.*

In extensive inves*tigations of Cuban Spanish (for a com*plete discussion see Te*rrell, December 1974), it was found that

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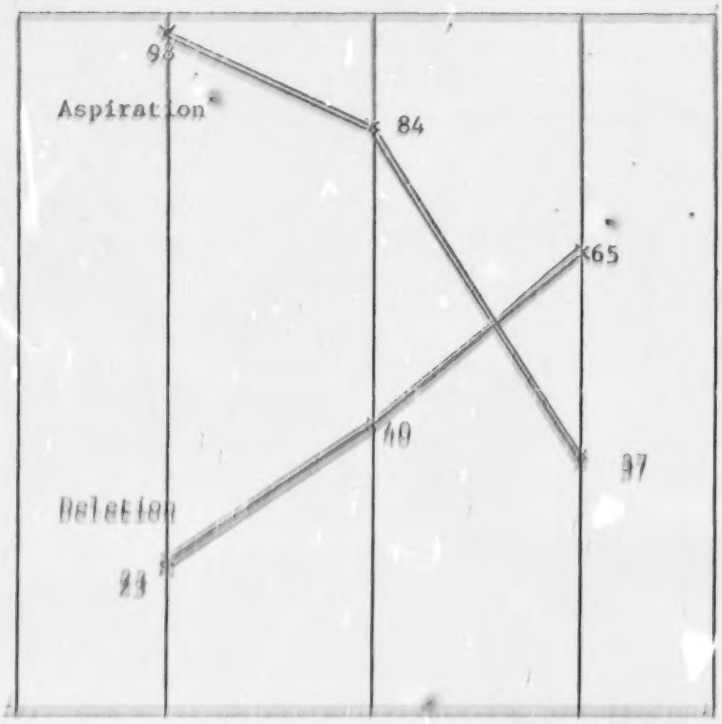
the weakening of syllable and word final /s/ was governed by two phonological processes, intrinsically ordered: Aspiration (s→h) and Deletion (h→ ∅). Aspiration was shown to be basically phonologically controlled. Deletion, on the other hand showed strong grammatical correlations in addition to the phonological correlations. The relationship of the phonological constraints for both processes (n=1149) is shown on the following graph:

GRAPH I Aspiration and Deletion



Aspiration = all h plus ∅

Deletion = ratio of ∅ to h plus ∅

Word final /S/ in Spanish may be an intrinsic part of a monomorphemic word such as *mes* 'month', *lapiz* 'pencil', *entonces* 'then', it may be a part of a morpheme, such as in the first person plural verb marker /mos/, *hablamos*, 'we speak', and it serves as a plural marker for determiners, adjectives, pronouns, and nouns, *mesa*, *mesas* 'table, tables,' since there is adjective-noun agreement in Spanish, plural markers may be redundant: *las muchachas bonitas* 'the pretty girls.'

In order to test the possibility for gross morphemic correlations, I compared the index of Deletion of /S/ in monomorphemic words to the index of Deletion of /S/ in grammatical morphemes. The results are given in Table 1.

TABLE I

Deletion	_____C	_____V	_____//
Inflectional	20% 447/2203	39% 263/673	69% 296/428
Monomorphemic	29% 156/535	45% 89/199	44% 43/98
All Categories	23% 673/2890	40% 390/957	65% 355/549

It is impossible to draw clear cut conclusion from the data. If functional constraints are at work, they are certainly not reducible to terms of grammatical vs lexical morphemes.

An examination of the index of Deletion of the /S/ of the verbal suffix /mos/ is quite interesting, however:

TABLE II

	_____C	_____V	_____//
/mos/	72% 110/153	76% 83/107	57% 13/23
Norm	23%	40%	65%

The deletion rate is quite high (except in preposal position where a low N makes the index unreliable). This /s/, on the other hand serves no contrastive function; there is no possibility of confusion if the morpheme is reduced to /mo/ (as in Italian). These data suggest that a gross grammatical/lexical distinction is incorrect. The original functionalist hypothesis was formulated in terms of information retention. Therefore I decided to reconsider the data in terms of grammatical redundancy.

There are data from previous studies which support this position. For example, Cedergren (1973) argued against Labov's proposal for a universal constraint on deletion rules which favored deletion in monomorphemic words by showing that the deletion rate for inflectional /r/ was consistently higher than the deletion of non-inflectional /r/.

TABLE III: /r/ Deletion

Syllable Final	Monomorphemic	Infinitive
15% 580/3949	13% 223/165	34% 114/3240

The infinitive /r/ is totally redundant, both phonologically and syntactically; the infinitive is always phonologically identifiable by it's thematic vowel and stress pattern: 1st conjugation habla(r) 'to speak', 2nd conjugation come(r) 'to eat, 3rd conjugation vivi(r) 'to live'. (Only in the case of the 3rd conjugation forms is there homophony, in this case with the 1st person singular Past (Preterite) forms: vivi 'I lived'. However, since the two forms never occur in the same syntactic (or semantic context, the meaning is entirely predictable.)

Another example of this type is the deletion of intervocalic /d/. This particular process is "stigmatized" in most dialects and therefore highly stratified socially. However, again it is clear that the deletion occurs much more frequently in the participial morpheme /do/. The following data are also from Cedergren's Panamanian study:

TABLE IV: D = deletion

Non-grammatical	Grammatical
21% 931/4434	34% 377/1110

The most crucial test of any redundancy hypothesis will occur within the noun phrase. Kiparsky (p. 206) claims that "number" is a strong category, i.e., highly resistent to loss. However, since all words of the simple noun phrase are marked for plurality, if redundancy is indeed a constraint on deletion, the morphological correlations with Deletion should be clear.

Originally, I had planned to divide nouns into three groups: (1) number indicated by a preceding modifier; (2) number indicated by a following modifier; and (3) unmodified noun. Examples would be:

(1) Los ninos ya llegaron..... "the children already arrived"
(2) Un lugar de arboles grandes "A place with big trees"
(3) Un grupo de plantas "A group of plants"

The number of occurrences of case (2) was so limited, however, that I will only report the data of the polar cases:

TABLE V: Noun Plurals

	___C	___V	___//
Modified previously	43%	63%	78%
Norm	23%	40%	65%
Unmodified	11%	20%	38%

The results are quite clear---the frequency of deletion is very high if the noun is <u>preceded</u> by a modifier which causes a plural indicator. If the noun is unmodified, the deletion rate is very low. Note, however, these correlations will be explanatory only if the deletion rate of preceding modifiers is very low. In order to ascertain if this is the case, I compared the deletion rate for the first adjective in the noun phrase (for the most part determiners) with the rate for all other adjectives, with presumably redundant plural markers.

TABLE VI: Modifiers

Adjectives	___C	___V	___//
1st	3%	2%	5%
Norm	23%	40%	65%
Others	39%	51%	71%

The data are clear; the /S/ which is preserved is the first plural marker encountered in surface structure.

The data from Spanish strongly support Kiparsky's proposal for distinctness conditions in functionalist terms. In particular, I propose that distinctness conditions are not correlated with morpheme functions, but rather with redundancy in surface structure. An exact characterization of redundancy will not be easy. It is well known that a certain amount of redundancy is necessary for ease of communication. For example, number in the noun phrase is almost always redundant if other factors such as discourse contexts, subject-verb agreement, certain morphological changes in determiners, etc., are taken into consideration. However, the interesting fact is that in spite of this Spanish speakers consistently avoid supressing all trace of a morphological indication of number. Even in dialects (Andalucian) in which Deletion is almost categorical, it is claimed that a system of vowel contrasts and harmony preserves the morphological distinction (see Hooper, 1973 for discussion). More detailed studies of constraints on deletion rules will further refine our notion of redundancy as a factor in language change.

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